Owner's Operator and Maintenance Manual

microAIR®

MA80 Series Mattresses

MA80 True Low Air Loss System
MA80B42 True Low Air Loss Bariatric 42"
MA80B48 True Low Air Loss Bariatric 48"
MA80RSR True Low Air Loss Raised Side Rail

MA85 Series Mattresses

MA85 True Air Loss and Alternating Pressure
M85B42 True Low Air Loss and Alternating Pressure Bariatric 42"
MA85B48 True Low Air Loss and Alternating Pressure Bariatric 48"
MA85RSR True Low Air Loss and Alternating Pressure Raised Side Rail

DEALER: This manual MUST be given to the user of the product.

USER: BEFORE using this product, read this manual and save for future reference.

For more information regarding Invacare products, parts, and services, please visit www.invacare.com

INVACARE®

Yes, you can.®

⚠ WARNING

DO NOT USE THIS PRODUCT OR ANY AVAILABLE OPTIONAL EQUIPMENT WITHOUT FIRST COMPLETELY READING AND UNDERSTANDING THESE INSTRUCTIONS AND ANY ADDITIONAL INSTRUCTIONAL MATERIAL SUCH AS OWNER'S MANUALS, SERVICE MANUALS OR INSTRUCTION SHEETS SUPPLIED WITH THIS PRODUCT OR OPTIONAL EQUIPMENT. IF YOU ARE UNABLE TO UNDERSTAND THE WARNINGS, CAUTIONS OR INSTRUCTIONS, CONTACT A HEALTHCARE PROFESSIONAL, DEALER OR TECHNICAL PERSONNEL BEFORE ATTEMPTING TO USE THIS EQUIPMENT - OTHERWISE, INJURY OR DAMAGE MAY OCCUR.

PROCEDURES OTHER THAN THOSE DESCRIBED IN THIS MANUAL MUST BE PERFORMED BY A QUALIFIED TECHNICIAN.

⚠ ACCESSORIES WARNING

Invacare products are specifically designed and manufactured for use in conjunction with Invacare accessories. Accessories designed by other manufacturers have not been tested by Invacare and are not recommended for use with Invacare products

SPECIAL NOTES

Signal words are used in this manual and apply to hazards or unsafe practices which could result in personal injury or property damage. Refer to the table below for definitions of the signal words.

SIGNAL WORD	MEANING
DANGER	Danger indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
WARNING	Warning indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
CAUTION	Caution indicates a potentially hazardous situation which, if not avoided, may result in property damage or minor injury or both.

NOTICE

THE INFORMATION CONTAINED IN THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE.

Check all parts for shipping damage and test before using. In case of damage, DO NOT use. Contact Invacare Customer Service Department for further instruction.

NOTE: Updated versions of this manual are available on www.invacare.com.

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REGISTER YOUR PRODUCT

The benefits of registering include:

1. Safeguarding your investment.
2. Ensuring long-term maintenance and servicing of your product.
3. Receiving updates with product information, maintenance tips and industry news.

Register ONLINE at warranty.invacare.com

Please have your model number and purchase date available to complete your registration. Any registration information you submit will only be used by Invacare Corporation and protected as required by applicable laws and regulations.

TYPICAL PRODUCT PARAMETERS

Electrical Parameters

NOTE: MA80 Power unit is used on MA80B42, MA80B48 and MA80RSR systems.

NOTE: MA85 Power unit is used on MA85B42, MA85B48 and MA85RSR systems.

	MA80/MA85
INPUT VOLTAGE AC:	110 V
INPUT FREQUENCY:	60 Hz
CURRENT:	2 A
MAXIMUM POWER CONSUMPTION:	150 ± 10 W
CIRCUIT PROTECTION:	Dual fused, 250 V, 5 A fast blow fuses
MODE OF OPERATION:	Continuous

Performance Parameters

	MA80	MA85
WEIGHT CAPACITY STANDARD MATTRESS: (36") BARIATRIC MATTRESS: (42" AND 48") **PRESSURE ZONE:** **MAXIMUM FLOW:** **MAXIMUM PRESSURE:** **MAXIMUM FLOW TIMER:** **SUPPORT SURFACE INFLATION TIME:**	350 lbs 42" Mattresses - 650 lbs 48" Mattresses 1,000 lbs 5 1275 ± 100 LPM 35 ± 5 mmHg 15 minutes 25 - 60 seconds	
PATIENT COMFORT CONTROL PRESSURES: SOFT PRESSURE: FIRM PRESSURE:	8 ± 4 mmHg 32 ± 4 mmHg	
CYCLE TIME:	1, 3, 5, 10 minutes	5, 10, 15, 20 minutes
PATIENT CONTACT:	Control unit and mattress have Latex-Free components	

Mechanical Parameters

	MA80	MA85
CONTROL UNIT DIMENSIONS (LxWxH): WEIGHT: POWER CORD: CONNECTION:	15" x 6.5" x 11" 15 lbs 10-14 Feet Long, Three-prong, Grounded Plug One ½" Single Quick-Disconnect Connector	15" x 6.5" x 11" 15 lbs 10-14 Feet Long, Three-prong, Grounded Plug Triple Flow - Two ½" and One ¼" Single Magnetic Quick Coupling
PACKAGING:	1 piece/box	
AIR FILTER:	Charcoal Air Filter with Fire Retardant	

Environmental Parameters

	MA80/MA85
OPERATING CONDITIONS	
AMBIENT TEMPERATURE:	50° - 104° F
RELATIVE HUMIDITY:	30% - 75% Non-Condensing
ATMOSPHERIC PRESSURE:	70 - 106 kPa
STORAGE AND SHIPPING CONDITIONS	
AMBIENT TEMPERATURE:	-40° - 158° F
RELATIVE HUMIDITY:	10% - 100%
ATMOSPHERIC PRESSURE:	50 - 106 kPa

LABEL LOCATION

DANGER-EXPLOSION HAZARD: DO NOT use in the presence of flammable anesthetics.

CAUTION: Equipment should be connected to a properly grounded receptacle (3-prong). Risk of Electrical shock. DO NOT remove back. Disconnect air hose before administering CPR.

NOTE: This label is on the back of the unit and also contains the serial number.

⚠ ATTENTION

Clean Filter Every 5 months and Whenever Dirty. Remove Filter, Wash, Dry & Replace.

⚠ WARNING

Patient entrapment with bed side rails may cause injury or death. Mattress MUST fit bed frame and side rails snugly to prevent patient entrapment. Follow the manufacturer's instructions. Monitor patient frequently. Read and understand the Owner's/Operator's Manual prior to using this equipment. Invacare product manuals are available at www.invacare.com or your dealer.

Label part number 1150708 Rev A

SECTION 1—GENERAL GUIDELINES

⚠ WARNING

SECTION 1 - GENERAL GUIDELINES contains important information for the safe operation and use of this product.

Contraindications

ALWAYS consult the patient's physician before using the MA80 and MA85 systems.

Installation

The MA80 series and MA85 series systems MUST be installed on medical bed frames with bed side rails. The side rails MUST be in the raised position whenever a patient is on the bed.

Controls on the footboard may be obstructed by the control unit on a few bed frames. It may be necessary to relocate the control unit. Refer to Installing the Control Unit on page 11.

Check that air hoses and power cord are clear of moving bed components before placing a patient on the bed. Operate all bed frame motorized functions through their full range of motion to be certain that there is no pulling, interference or pinching.

DO NOT strap the mattress to the bed frame at the head and foot ends. Secure ALL mattress straps. Secure the straps to the bed deck at the head and foot ends and to the frame at the center of the bed. Otherwise damage to the mattress will occur when the head and foot ends are raised. Refer to Installing the Mattress Replacement System on page 10.

Entrapment May Occur

⚠ WARNING

Patient entrapment with bed side rails may cause injury or death. Mattress MUST fit bed frame and side rails snugly to prevent patient entrapment. Follow the manufacturer's instructions. Monitor patient frequently. Read and understand the Owner's/Operator's Manual prior to using this equipment. Invacare product manuals are available at www.invacare.com or your dealer.

Proper patient assessment and monitoring, and proper maintenance and use of equipment is required to reduce the risk of entrapment. Variations in bed rail dimensions, and mattress thickness, size or density could increase the risk of entrapment. Visit the FDA website at http://www.fda.gov to learn about the risks of entrapment. Review "A Guide to Bed Safety", published by the Hospital Bed Safety Workgroup, located at www.invacare.com. Use the link located under each bed rail product entry to access this bed safety guide.

Refer to the owner's manuals for beds and rails for additional product and safety information.

After any adjustments, repair or service and before use, make sure all attaching hardware is tightened securely. Assist rails with dimensions different from the original equipment supplied or specified by the bed manufacturer may not be interchangeable and may result in entrapment or other injury.

Fire Hazard

⚠ DANGER

Smoking

DO NOT SMOKE while using this device. This system uses room air for circulation through the mattress. A cigarette can burn a hole in the bed surface and cause damage to the mattress. Also, patient clothing, bed sheets, etc. may be combustible and cause a fire. Failure to observe this warning can result in severe fire, property damage and cause physical injury or death.

Smoking by visitors in the room will contaminate the system. Therefore, visitor smoking is NOT permitted.

Anesthesia Equipment

There is an explosion risk if used with flammable anesthetics.

Oxygen

There is a possible fire hazard when used with oxygen administering equipment other than nasal mask or half bed tent type. The oxygen tent should NOT extend below mattress support level.

Electrical

⚠ DANGER

Electrical shock hazard. DO NOT remove cover. Refer to qualified service personnel.

Before performing any maintenance to the control unit, disconnect the power cord from the wall outlet.

DO NOT insert items into any openings of the control unit. Doing so may cause fire or electric shock by shorting the internal components

The control unit MUST be kept away from all heat sources and radiators during operation.

Connect the equipment to properly grounded three prong wall outlet using 10-14 ft. hospital grade power cord provided with the product.

Grounding reliability depends upon a properly grounded receptacle (3-prong).

SECTION 2—OPERATION

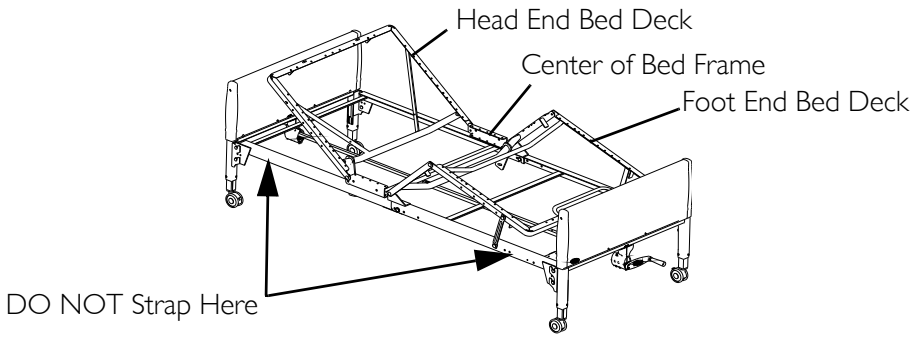
CAUTION

The control unit and mattress on the MA80 series are designed to be used as a system. DO NOT replace mattresses or control units with other models or other brands. Otherwise, damage to the system may occur. Contact your supplier to get the correct replacement if needed.

Installing the Mattress Replacement System

CAUTION

DO NOT strap the mattress to the bed frame at the head and foot ends. Secure ALL mattress straps. Secure the straps to the bed deck at the head and foot ends and to the frame at the center of the bed. Otherwise damage to the mattress will occur when the head and foot ends are raised.



NOTE: For this procedure, refer to FIGURE 2.1.

NOTE: The powered mattress comes with ten nylon buckle straps.

1. Remove the original foam mattress from the bed.
2. If necessary, lower the side rails to facilitate installation of the mattress.
3. Unroll the powered mattress and place it on the bed frame.

NOTE: Ensure that the hose is towards the foot end of the bed.

4. Use the buckle straps to secure the powered mattress to the bed deck in the following locations:
   - Head End - Head End Bed Deck
   - Foot End - Foot End Bed Deck
   - Center - Center of the Bed Frame

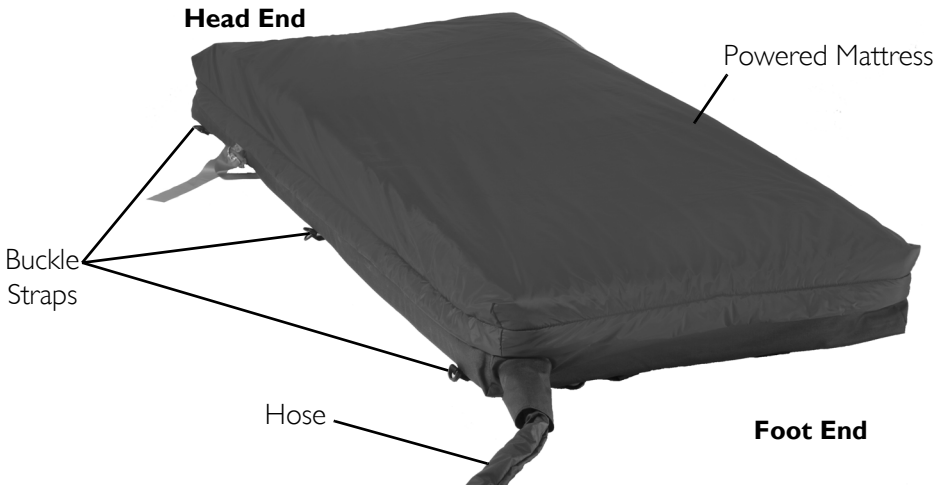


FIGURE 2.1 Installing the Mattress Replacement System

Installing the Bed Side Rails

⚠ WARNING

Patient entrapment with bed side rails may cause injury or death. Mattress MUST fit bed frame and side rails snugly to prevent patient entrapment. Follow the manufacturer's instructions. Monitor patient frequently. Read and understand the Owner's/Operator's Manual prior to using this equipment. Invacare product manuals are available at www.invacare.com or your dealer.

NOTE: Refer to the instructions provided with the side rails for the installation procedure.

Installing the Control Unit

NOTE: For this procedure, refer to FIGURE 2.2

1. Pull out the bed hook on the back of the control unit.
2. Place the control unit on the footboard.

NOTE: If the bed does not have a footboard, place the control unit on a flat surface, leaving room for the hose to hang down.

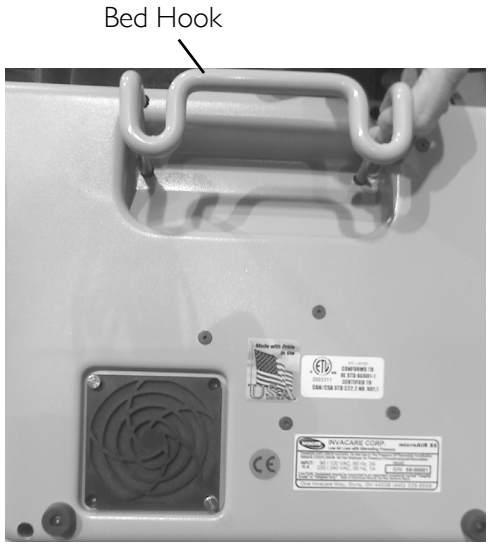


FIGURE 2.2 Installing the Control Unit

Connecting the Hose

CAUTION

Ensure that the hose connecting the control unit to the mattress is routed such that it cannot be stepped on, kinked, squeezed or otherwise damaged.

NOTE: For this procedure, refer to FIGURE 2.3.

1. Locate the hose at the foot end of the mattress.
2. Locate the control unit connector on the right side of the control unit.
3. Lift and hold the connector cover up.
4. Push the hose connector (Detail "A") onto the control connector.
5. Ensure the hose connector is flush with the control unit connector.

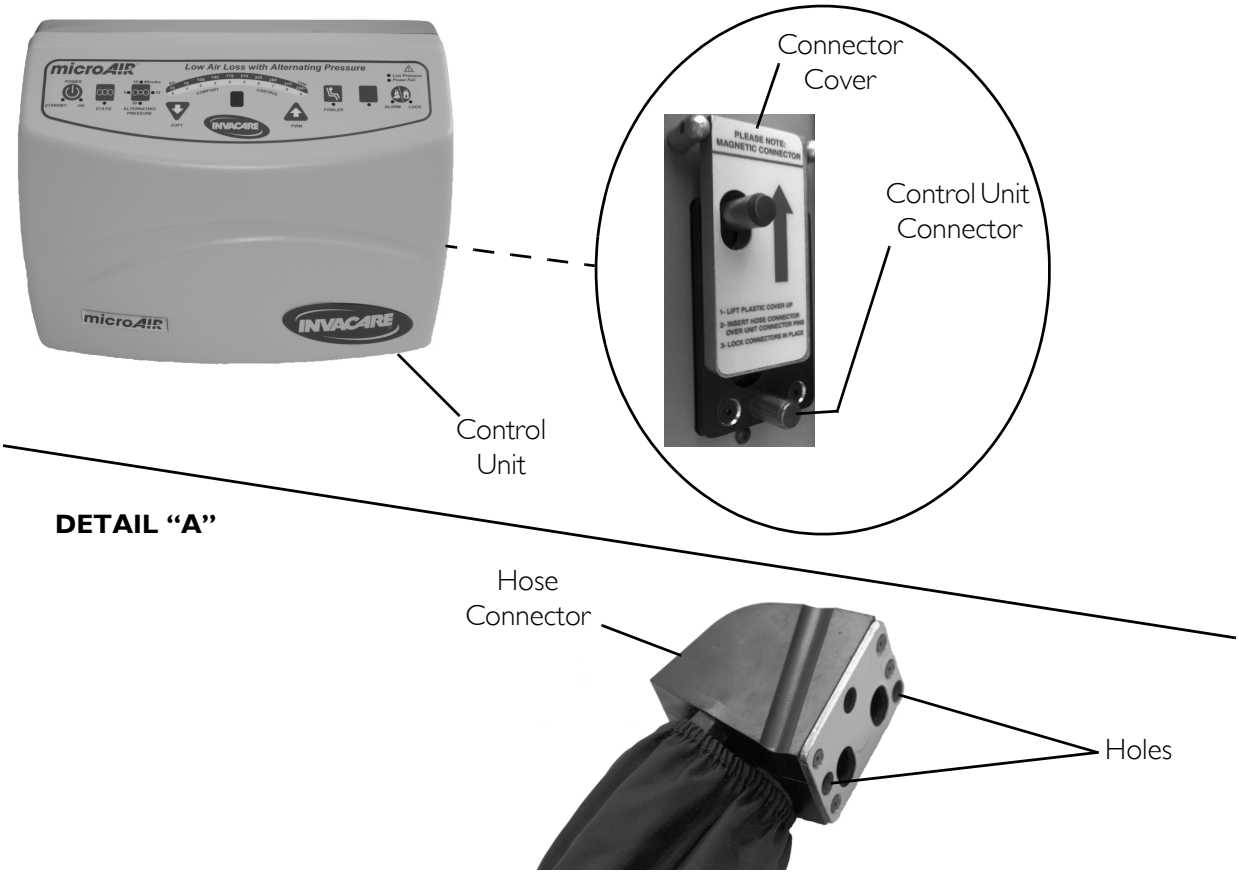


FIGURE 2.3 Connecting the Hose

Connecting the Power Cord

⚠ WARNING

DO NOT alter plug to fit a non-conforming outlet. Instead, have an electrician install a properly grounded outlet. Failure to use the correct plug and outlet can result in a potential safety hazard.

CAUTION

Ensure that the power cord of the control unit is not pinched, or has any objects placed on it, and also ensure it is not located where it can be stepped on or tripped over.

NOTE: For this procedure, refer to FIGURE 2.4.

1. Examine the hospital grade power cord supplied with the control unit.
2. Perform one of the following:
   - If the plug is damaged - Call your supplier for a replacement hospital grade cord.
   - If the plug is not damaged - Plug the end of the supplied hospital grade power cord into the power outlet on the side of the control unit.
3. Plug the other end of the plug into a properly grounded outlet on the wall.

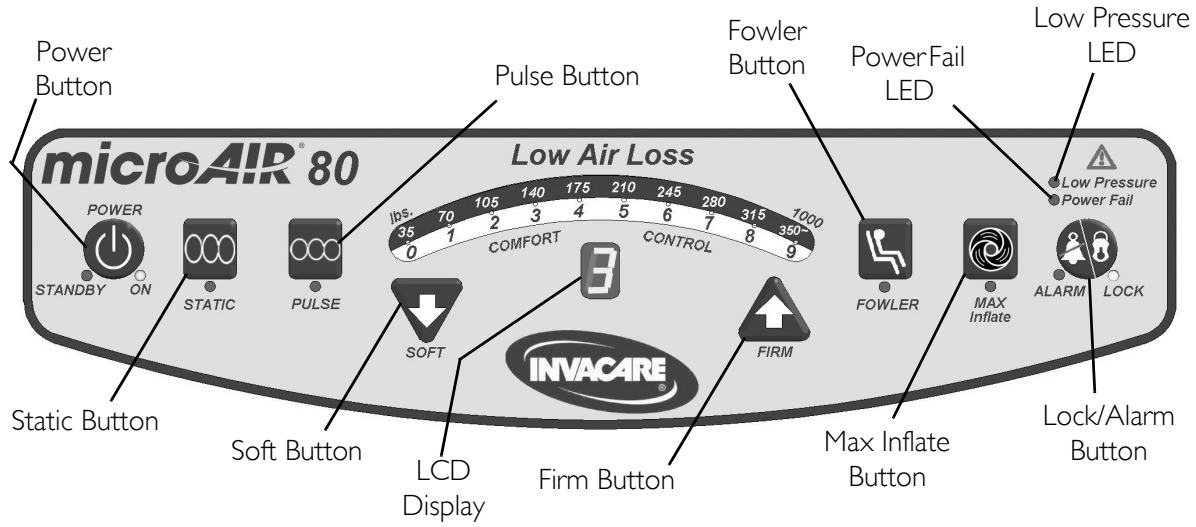
NOTE: Once the unit is plugged in, an AMBER LED on the control unit is lit indicating that the system is in STAND BY mode.

FIGURE 2.4 Connecting the Power Cord

Using the Front Panel

NOTE: For this procedure, refer to FIGURE 2.5.

DETAIL "A" - MA80 SERIES FRONT PANEL



DETAIL "B" - MA85 SERIES FRONT PANEL

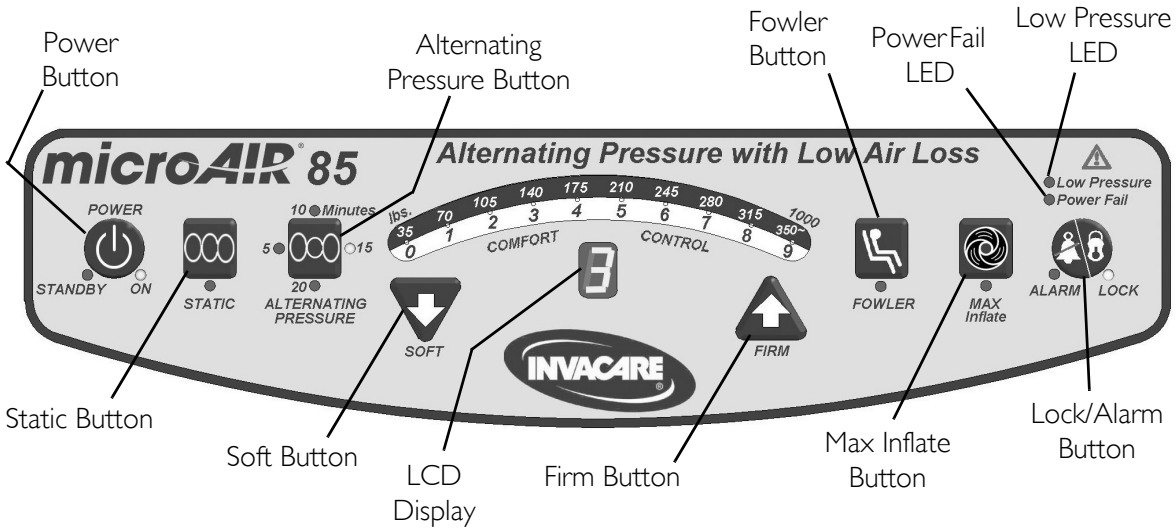


FIGURE 2.5 Using the Front Panel

Power Button

1. To turn the control unit on or off, press and release the Power button ( ).

NOTE: Once the unit is plugged in, an AMBER LED on the control unit is lit indicating that the system is in STAND BY mode. Once the Power button is pressed and released, a GREEN LED illuminates indicating that the control unit is on.

NOTE: If the power comes on after a power outage, the control unit will go through its system initialization routine for a few seconds and then resume the desired function.

Pulse Button (MA80 Power Unit)

1. Press the Pulse button ( ) to Turn on Pulse mode and select one of four Pulse Times - 1, 3, 5 or 10 minutes.

NOTE: The pulse times are 1, 3, 5 or 10 minutes. The pulse times indicate the time between each low pulse. For example, if 5 minutes is selected, all the air cushions in the mattress will inflate for 5 minutes (the selected time) to the selected comfort setting and then drop 20% pressure for 20 seconds.

Alternating Pressure Button (MA85 Power Unit)

1. Press the Alternating Pressure button ( ) to select one of four alternating pressure modes.

NOTE: The alternating pressure times indicate the frequency of deflation or inflation of half of the air cushions (even or odd numbered). For example, 10 minutes is selected. In this example, the even numbered air cushions in the mattress will deflate, while the odd numbered cushions remain at constant pressure. When 10 minutes has elapsed, the even numbered air cushions will inflate while the odd numbered cushions remain at constant pressure. When 10 minutes has elapsed again, the odd numbered air cushions deflate while the even numbered cushions remain at constant pressure. The air cushions continue to inflate or deflate like this as long as an alternating pressure time has been selected. At all times, half of the air cushions remain at a constant pressure when an alternating pressure time has been selected.

Adjusting the Minimum Pressure Setting (A/P Low)

The minimum pressure setting during Alternating Pressure is set to 0 (2 mmHg) at the factory. This means that the mattress will deflate as much as possible during the deflation time when using 10, 15 or 20 minute Alternating Pressure times. The setting can be changed so the mattress will only deflate to 50% of the selected pressure setting.

1. Ensure the Standby LED is lit.
2. Press and hold the Alternating Pressure ( ) and Fowler ( ) buttons.
3. Read the LCD Display. The LCD Display will show:
   - 0 if the current setting is 0 (2 mmHg).
   - 5 if the current setting is 50% of the selected pressure.

NOTE: The On and Standby LEDs will be lit.

4. Press the Soft ( ) or Firm ( ) buttons to toggle between the two settings.
5. Press the Power button to save the setting.

NOTE: The control unit will exit this adjustment mode if no button is pressed for 30 seconds.

Static Button

1. Press the Static button ( ) to select the static mode and maintain the mattress at constant pressure.

NOTE: The Static LED is illuminated GREEN.

Firm/Soft Buttons

1. Select comfort pressure settings by pressing Firm ( ) or Soft ( ) buttons.
   - Soft Button - Pressing this button reduces the pressure in the mattress.
   - Firm Button - Pressing this button increases the pressure in the mattress.

NOTE: The patient comfort pressure ranges from Soft (level 0 = 6±4 mmHg) to Firm (level 9 = 32±6 mmHg). The Comfort Control LED displays the patient comfort pressure levels from 0 to 9 and provides a guide to the caregiver to set approximate comfort pressure level depending on the patient weight. If the patient's weight to height ratio is above average, increase the pressure setting by approximately 20%.

Fowler Button

Manual Mode

1. Press the Fowler button ( ) to activate the patient fowler mode.

NOTE: The Fowler LED illuminates when in this mode. When this mode is activated, the control unit increases the pressure in the mattress to prevent the patient from bottoming out.

Automatic Wireless Mode

When the bed articulates to 45°, the transmitter in the head of the mattress signals the control unit to increase the pressure in the mattress by 80% to prevent the patient from bottoming out.

Fowler Transmitter Setup

1. Make sure the bed is in the flat position.
2. Make sure fowler transmitter is in the mattress cover pocket in the orientation indicated on the transmitter.

NOTE: The mattress cover pocket is on the inside of the lower mattress cover on the left side of the head end of the mattress.

3. Press and hold the Fowler ( ) and Max Inflate ( ) buttons.

NOTE: The Fowler LED is lit and L displays in the LCD Display.

4. Raise the bed to 45°.

NOTE: The control unit will beep and will return to Standby.

5. Perform one of the following:
   - Cancel - Press the Fowler button to exit Fowler Transmitter Setup without linking to a transmitter.
   - Save - Wait 60 seconds without pressing a key.

Max Inflate Button

1. Press the Max Inflate button ( ) to select the max inflate mode and inflate the mattress rapidly to maximum firmness (pressurized to 35 ± 6 mmHg). A series of beeps sound every three minutes as a reminder that the Max Inflate mode is active. After 30 minutes, the Max Inflate mode deactivates and the control unit defaults to the previous setting.

NOTE: It takes 25-60 seconds for the mattress to inflate fully (inflation time depends on size of mattress).

NOTE: It is recommended that Max Inflate setting be used during patient ingress/egress, patient wound care, patient turning or patient cleaning.

2. Press the Max Inflate button again to manually disengage Max Inflate mode.

NOTE: This will deactivate the Max Inflate LED.

Lock/Alarm Silence Button

1. Press the Lock/Alarm Silence button ( ) to select one of the following modes:
   - Lock Mode - Pressing this button locks out all control unit functions, including the On button, to prevent any tampering with the settings. Press the button for approximately 3-5 seconds for the Lock LED to activate.

   NOTE: The Lock LED illuminates when in this mode.

   - Alarm Silence mode - Pressing this button silences the alarm that sounds in the event of power failure or when the hose is disconnected from the control unit.

   NOTE: The Alarm LED illuminates when in this mode.

Power Fail LED

In the event of power outage, an alarm sounds and the Power Fail LED flashes AMBER. The control unit has internal memory and retains the previous settings during the power outage.

Low Pressure LED

In the event that the mattress hose disconnects, an alarm sounds and Low Pressure LED flashes AMBER. Once the low pressure problem is fixed, the control unit resumes operation in the previously set mode.

Powering Up the System

NOTE: For this procedure, refer to FIGURE 2.5 on page 14.

1. Turn on the power to the system by pressing the Power button on the control unit.

NOTE: Once the button is released, a GREEN LED illuminates when the unit is on.

Placing the Patient on the Mattress

1. Press the Max Inflate button to turn on the control unit to maximum flow.

NOTE: In this mode, the Max Inflate LED lights up.

2. After the mattress is fully inflated, place the patient on the bed.
3. Ensure that the patient's feet are towards the foot end of the mattress (the end with the hose).
4. Center the patient on the bed from side-to-side and head-to-foot.

NOTE: Special positioning may be required with contracted patients to provide comfortable positions.

5. After placing the patient, make certain no objects will fall under the patient, such as feeding tubes, IV's etc.
6. Wait five minutes for the mattress pressure to stabilize.
7. Set the comfort pressure to the desired comfort level.
8. Verify that the patient has not bottomed out by performing the following steps:
   A. Ensure that the patient is lying flat on his/her back in the middle of the mattress.
   B. Place four fingers between the air cushions directly underneath the sacral region of the patient's body.
   C. Ensure that there is 3 to 4-finger width clearance between the bottom of the patient and the bed frame.
   D. Adjust the comfort setting, if needed.
   E. Wait five minutes for the mattress pressure to stabilize.
   F. Repeat STEPS A-E until patient has not bottomed out and patient comfort is achieved.
9. If the patient feels that the bed is too soft/hard, press the Soft or Firm button to adjust the comfort settings.
10. Use a regular pillow to help support and stabilize the patient's head.

Transferring Patient From/To a Gurney

⚠ WARNING

ALWAYS engage the wheel locks of the bed and the wheel locks of the gurney before transferring the patient between the bed and the gurney.

1. Engage the wheel locks of the bed. Refer to the owner's manual provided with the bed.
2. Engage the wheel locks of the gurney. Refer to the owner's manual provided with the gurney.
3. Press the Max Inflate button to achieve maximum mattress pressure.
4. Raise or lower the bed to match the gurney height. Refer to the owner's manual provided with the bed.
5. When the mattress has reached maximum firmness, perform one of the following:
   - Bed to Gurney Transfer - Slide the patient onto the gurney.
   - Gurney to Bed Transfer - Slide the patient onto the bed.

Transferring Patient From/To a Wheelchair

⚠ WARNING

ALWAYS engage the wheel locks of the bed and the wheel locks of the wheelchair before transferring the patient between the bed and the wheelchair.

1. Engage the wheel locks of the bed. Refer to the owner's manual provided with the bed.
2. Engage the wheel locks of the wheelchair, if applicable. Refer to the owner's manual provided with the wheelchair.
3. Press the Max Inflate button to achieve maximum mattress pressure.
4. Raise or lower the bed to match the wheelchair height. Refer to the owner's manual provided with the bed.
5. When the mattress has reached maximum firmness, perform one of the following:
   - Bed to Wheelchair Transfer - Slide the patient onto the wheelchair.
   - Wheelchair to Bed Transfer - Slide the patient onto the bed.

Preparing for CPR Procedure

NOTE: For this procedure, refer to FIGURE 2.6.

1. Lift the connector cover (Detail "A").
2. Pull the hose connector (Detail "B") from the control unit connector.

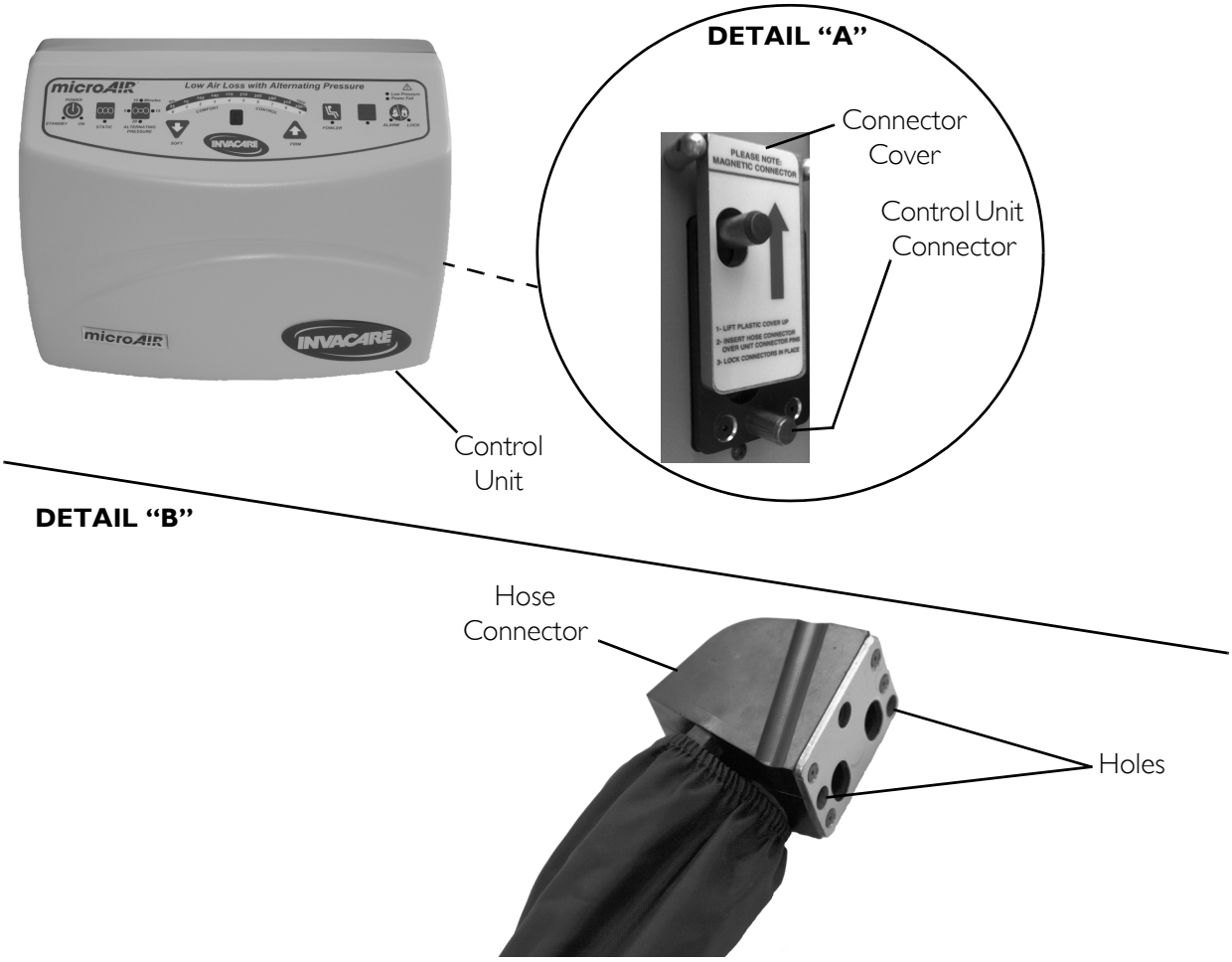


FIGURE 2.6 Preparing for CPR Procedure

SECTION 3—MAINTENANCE AND TROUBLESHOOTING

Cleaning the System

⚠ WARNING

Before cleaning or disassembling the MA80 series, check the underside of the mattress folds for sharp objects such as scissors, needles, etc. These objects should be removed and discarded before proceeding with further cleaning or disassembly; otherwise injury or damage to the product may occur.

Because of potential risk of infectious exposure, cleaning with the patient on the bed is not recommended.

All equipment should be inspected. Any item that is visibly soiled with the patient's blood or other body fluids should be properly cleaned or removed.

Laundry workers should treat all soiled bedding as if it were contaminated with pathogenic microorganisms.

1. Remove the bedding.
2. If necessary, inflate the mattress.
3. Ensure that the control unit is off.
4. Unplug the power cord from the wall outlet.
5. Ensure that the underside of the mattress is clear of all sharp objects.
6. Examine the surface of the control unit and mattress assembly components for visible blood or body fluids.
7. Perform one of the following:
   - If blood is present, decontaminate the product.
     i. Remove all visible soil with disposable paper towels.
     ii. Scrub the area with freshly prepared effective phenolic detergent disinfectant solution.
   - If blood is not present, remove any soil from the cover with paper towels.

NOTE: If soiled, the cover should be removed, cleaned and decontaminated.

8. Perform the following steps to clean the mattress cover:
   A. Using a clean sponge or paper towel, wipe down the cover surface with a dilute detergent solution of quaternary cleaner disinfectant or other germicidal detergent solution.

B. Remove the cover and launder it using the following method:

CAUTION

Laundry workers should always wash their hands before working with clean bedding.

DO NOT overload the machine.

DO NOT use chlorine bleach because it may damage the fabric coating.

High air temperatures will damage the fabrics and void the Invacare warranty.

i. Place the cover in a washing machine.

ii. Wash with warm water (below 120°F).

iii. Add detergent and disinfectant according to the manufacturer's instructions.

iv. Remove excess water.

v. Set the dryer to the lowest setting (below 120°F).

vi. Dry the cover until it is completely dry.

9. Perform the following steps to clean the control unit and hose fittings:
   A. Wipe all controls, chassis and hose fittings with a quaternary disinfectant solution.
   B. Using a nylon brush, gently clean all crevices as they can harbor microorganisms.
   C. Air dry all treated surfaces.
10. Perform the following steps to clean the mattress components (air cushions, mattress base, etc.):
   A. Using a clean sponge or paper towel, wipe down the mattress components with a dilute detergent solution of quaternary cleaner disinfectant or other germicidal detergent solution.
   B. Wipe the mattress components with a clean dry cloth.

Storing the System

1. Ensure that the control unit is off and disconnect the power cord from the wall outlet.
2. Clean the system. Refer to Cleaning the System on page 21.
3. Disconnect the air hose connector from the control unit and allow air to vent from the mattress.
4. Gently roll up the mattress with minimal handling and agitation.
5. Ensure the cover surface is inside the roll.
6. Store the unit, keeping the mattress with the control unit.

Changing the Filter

NOTE: For this procedure, refer to FIGURE 3.1.

Clean the filter every 5 months or whenever it is dirty.

1. Remove the two screws securing the filter cover to the back of the control unit.
2. Remove the filter.
3. Wash the filter with water and a mild detergent.
4. Dry the filter completely.
5. Install the filter into the back of the control unit.
6. Secure the filter cover to the back of the control unit using the two screws.

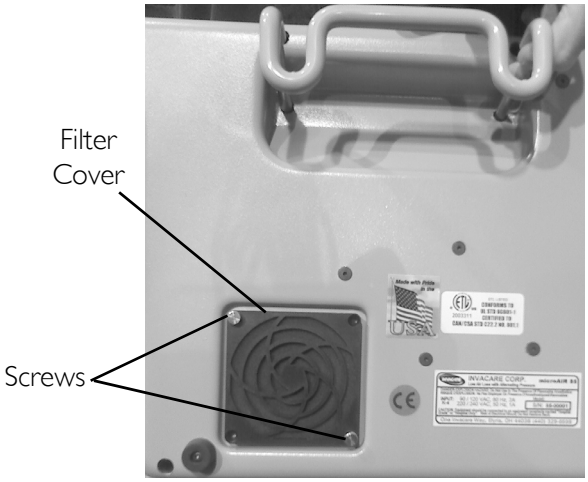


FIGURE 3.1 Changing the Filter

Troubleshooting

PROBLEM	CAUSE	SOLUTION
Mattress not inflating Not alternating properly	Mattress hose disconnected	Connect hose connectors and lock them in place
	Air hose kinked or split	Unkink hose or replace split hose
	Major leak in the air cushions or overlay pad	Replace leaking air cushions or overlay pad
	Kinked or split manifold	Unkink manifold or replace split manifold
	Has power and fuse is good, control unit does not come on	Send unit back for repair
	Not alternating, valve malfunction	Send control unit back to factory for repair
	No air, blower malfunction	Send unit for repair
No power	Control unit off	Check power source and turn on unit
	Power cord disconnected	Connect power cord to the power source
	No power in the power source	Check power source has power power and turn it On
	Power outage	Wait till the power source has power
	Blown fuse	Replace blown fuse with an equivalent fuse

LIMITED WARRANTY

PLEASE NOTE: THE WARRANTY BELOW HAS BEEN DRAFTED TO COMPLY WITH FEDERAL LAW APPLICABLE TO PRODUCTS MANUFACTURED AFTER JULY 4, 1975.

This warranty is extended only to the original purchaser who purchases this product when new and unused from Invacare or a dealer. This warranty is not extended to any other person or entity and is not transferable or assignable to any subsequent purchaser or owner. Coverage under this warranty will end upon any such subsequent sale or other transfer of title to any other person.

This warranty gives you specific legal rights and you may also have other legal rights which vary from state to state.

Invacare warrants the mattress and cover when purchased new and unused to be free from defects in materials and workmanship for a period of one year from the date of purchase from Invacare or a dealer, with a copy of the seller's invoice required for coverage under this warranty. Invacare warrants the control unit when purchased new and unused to be free from defects in materials and workmanship for a period of two years from the date of purchase from Invacare or a dealer, with a copy of the seller's invoice required for coverage under this warranty.If within such warranty period any such product shall be proven to be defective, such product shall be repaired or replaced, at Invacare's option. This warranty does not include any labor or shipping charges incurred in replacement part installation or repair of any such product. Invacare's sole obligation and your exclusive remedy under this warranty shall be limited to such repair and/or replacement.

For warranty service, please contact the dealer from whom you purchased your Invacare product. In the event you do not receive satisfactory warranty service, please write directly to Invacare at the address on the back cover. Provide dealer's name, address, model number, and the date of purchase, indicate nature of the defect and, if the product is serialized, indicate the serial number.

Invacare Corporation will issue a return authorization. The defective unit or parts must be returned for warranty inspection using the serial number, when applicable, as identification within thirty days of return authorization date. DO NOT return products to our factory without our prior consent. C.O.D. shipments will be refused; please prepay shipping charges.

LIMITATIONS AND EXCLUSIONS: THE WARRANTY SHALL NOT APPLY TO PROBLEMS ARISING FROM NORMAL WEAR OR FAILURE TO ADHERE TO THE ENCLOSED INSTRUCTIONS. IN ADDITION, THE FOREGOING WARRANTY SHALL NOT APPLY TO SERIAL NUMBERED PRODUCTS IF THE SERIAL NUMBER HAS BEEN REMOVED OR DEFACED; PRODUCTS SUBJECTED TO NEGLIGENCE, ACCIDENT, IMPROPER OPERATION, MAINTENANCE OR STORAGE; OR PRODUCTS MODIFIED WITHOUT INVACARE'S EXPRESS WRITTEN CONSENT INCLUDING, BUT NOT LIMITED TO: MODIFICATION THROUGH THE USE OF UNAUTHORIZED PARTS OR ATTACHMENTS: PRODUCTS DAMAGED BY REASON OF REPAIRS MADE TO ANY COMPONENT WITHOUT THE SPECIFIC CONSENT OF INVACARE; PRODUCTS DAMAGED BY CIRCUMSTANCES BEYOND INVACARE'S CONTROL; PRODUCTS REPAIRED BY ANYONE OTHER THAN AN INVACARE DEALER, SUCH EVALUATION SHALL BE SOLELY DETERMINED BY INVACARE.

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